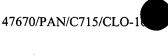
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## WHAT IS CLAIMED IS:

vertical cavity surface laser, emitting comprisind:

an optical cavity adjacent a first mirror;

an emit\ting mirror adjacent said optical cavity;

a mode \defining aperture for controlling transverse modes; and

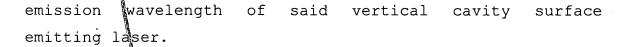
absorbing layer integrated within the emitting mirror, wherein\said absorbing layer is laterally located within at least a portion of said mode defining aperture.

- The vertical cavity surface emitting laser of 2. claim 1 wherein salid absorbing layer comprises a layer of conductive material.
- The vertical cavity surface emitting laser of 3. wherein said conductive material comprises titanium.
- The vertical davity surface emitting laser of claim 1 wherein said absorbing layer comprises a layer of semiconductor material.
- The vertical cavity surface emitting laser of 5. claim 4 wherein said semiconductor material is doped p-25 type.
- The vertical cavity surface emitting laser 6. claim 4 wherein the semiconductor material is a narrow bandgap material, and wherein an absorption edge of said 30 semiconductor material is at a longer wavelength than

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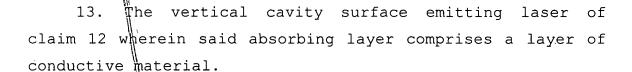


- 7. The vertical cavity surface emitting laser of claim 1 wherein said emitting mirror comprises a DBR having a plurality of mirror periods.
  - 8. The vertical cavity surface emitting laser of claim 7 wherein said absorbing layer is formed at or near a null in optical standing wave intensity pattern in closest proximity to an emission facet.
    - 9. The vertical cavity surface emitting laser of claim 1 wherein said upper ohmic contact comprises an intracavity contact coupled to the optical cavity.
  - 10. The vertical cavity surface emitting laser of claim 9 wherein said emitting mirror comprises a dielectric DBR having a plurality of mirror periods.
  - 11. The vertical cavity surface emitting laser of claim 10 wherein optical thickness of mirror period containing said absorbing layer does not equal optical thickness of remaining mirror periods.
  - 12. The vertical cavity surface emitting laser of claim 11 wherein said absorbing layer is formed at or near a null in optical standing wave intensity pattern in closest proximity to an emission facet.

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- 5 14. The vertical cavity surface emitting laser of claim 13 wherein said conductive material comprises titanium.
- 15. The vertical cavity surface emitting laser of claim 1 wherein said emitting mirror comprises a hybrid mirror having a semiconductor portion and a dielectric portion.
  - 16. The vertical cavity surface emitting laser of claim 15 wherein said absorbing layer is integrated within said dielectric portion.
  - 17. The vertical cavity surface emitting laser of claim 16 wherein said absorbing layer is formed at or near a standing wave null in optical intensity pattern that is closest to an emission facet.
  - 18. The vertical cavity surface emitting laser of claim 17 wherein said absorbing layer comprises a layer of conductive material.
    - 19. The vertical cavity surface emitting laser of claim 17 wherein said conductive material comprises titanium.
    - 20. A vertical cavity surface emitting laser, comprising:

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an obtical cavity adjacent a first mirror;

a semiconductor emitting mirror adjacent said optical cavity; and

absorbing layer integrated within the emitting 5 mirror.

- 21. The vertical cavity surface emitting laser of claim 20 wherein said absorbing layer comprises a layer of semiconductor material.
- Wertical cavity surface emitting laser of 22. claim 21 whereim said semiconductor material is doped ptype.
- 23. The vertical cavity surface emitting laser of claim 21 wherein the semiconductor material is a narrow bandgap material, and wherein an absorption edge of said semiconductor material is at a longer wavelength than emission wavelength of said vertical cavity surface emitting laser.
- The vertical \( \) cavity surface emitting laser 24. claim 20 wherein said absorbing layer is formed at or near a null in optical standing wave intensity pattern closest proximity to an emission facet.
- A method for reducing external feedback vertical cavity surface emitting laser, comprising:

determining optimum thackness of at least one of a plurality of high index layers in a first emitting mirror 30 of a first VCSEL in accordance with air side reflectivity of said first VCSEL;

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determining optimum thickness of an absorbing layer in a second emission mirror of a second VCSEL in accordance with air side reflectivity of said second VCSEL using said optimum thickness of said high index layers; and

determining optimum thickness of at least one of a plurality of low index of refraction layers in a third emission mirror of a third VCSEL in accordance with air side reflectivity of said third VCSEL using said optimum thickness of said high index layers and said optimum thickness of said absorbing layer.